

Data sheet for SINAMICS G120X

Article No.: 6SL3220-2YE26-0AF0

Client order no. : Order no. : Offer no. : Remarks :

Rated data			
Input			
	Number of phases	3 AC	
	Line voltage	380 480 V +10 % -20 %	
	Line frequency	47 63 Hz	
	Rated voltage	400V IEC	480V NEC
	Rated current (LO)	24.50 A	21.30 A
	Rated current (HO)	18.25 A	14.00 A
Output			
	Number of phases	3 AC	
	Rated voltage	400V IEC	480V NEC 1)
	Rated power (LO)	11.00 kW	15.00 hp
	Rated power (HO)	7.50 kW	10.00 hp
	Rated current (LO)	26.00 A	21.00 A
	Rated current (HO)	18.00 A	14.00 A
	Rated current (IN)	27.00 A	
	Max. output current	35.00 A	
Pulse frequency		4 kHz	
Οι	tput frequency for vector control	0 200 Hz	
Οι	atput frequency for V/f control	0 550 Hz	
Overload capability			
Low Overload (LO)			

Low Overload (LO)

110% base load current IL for 60 s in a 300 s cycle time

High Overload (HO)

 $150\%\,x$ base load current IH for 60 s within a 600 s cycle time

General tech. specifications		
0.70 0.85		
0.96		
0.98		
67 dB		
0.344 kW		
RFI suppression filter for Category C2		
Category C2		
without SIRIUS device (e.g. via S7- 1500F)		

Communication

Communication PROFINET, EtherNet/IP



Item no. : Consignment no. : Project :

Inputs / outputs		
Standard digital inputs		
Number	6	
Switching level: $0 \rightarrow 1$	11 V	
Switching level: $1 \rightarrow 0$	5 V	
Max. inrush current	15 mA	
Fail-safe digital inputs		
Number	1	
Digital outputs		
Number as relay changeover contact	2	
Output (resistive load)	DC 30 V, 5.0 A	
Number as transistor	0	
Analog / digital inputs		
Number	2 (Differential input)	
Resolution	10 bit	
Switching threshold as digital input		
0 → 1	4 V	
1 → 0	1.6 V	
Analog outputs		
Number	1 (Non-isolated output)	

PTC/ KTY interface

1 motor temperature sensor input, sensors that can be connected PTC, KTY and Thermo-Click, accuracy $\pm 5\,^{\circ}\text{C}$

Closed-loop control techniques	
V/f linear / square-law / parameterizable	Yes
V/f with flux current control (FCC)	Yes
V/f ECO linear / square-law	Yes
Sensorless vector control	Yes
Vector control, with sensor	No
Encoderless torque control	No
Torque control, with encoder	No



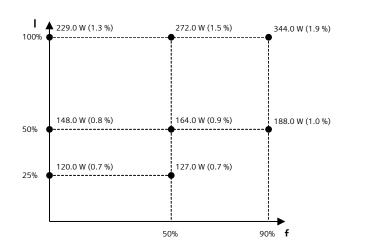
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Ambient conditions		
Standard board coating type	Class 3C2, according to IEC 60721-3-3: 2002	
Cooling	Air cooling using an integrated fan	
Cooling air requirement	0.018 m ³ /s (0.653 ft ³ /s)	
Installation altitude	1,000 m (3,280.84 ft)	
Ambient temperature		
Operation	-20 45 °C (-4 113 °F)	
Transport	-40 70 °C (-40 158 °F)	
Storage	-25 55 °C (-13 131 °F)	
Relative humidity		
Max. operation	95 % At 40 °C (104 °F), condensation and icing not permissible	
Connections		
Conn	ections	
Conno	ections	
	0.15 1.50 mm ² (AWG 24 AWG 16)	
Signal cable	0.15 1.50 mm ²	
Signal cable Conductor cross-section	0.15 1.50 mm ²	
Signal cable Conductor cross-section Line side	0.15 1.50 mm ² (AWG 24 AWG 16)	
Signal cable Conductor cross-section Line side Version	0.15 1.50 mm ² (AWG 24 AWG 16) screw-type terminal 1.50 16.00 mm ²	
Signal cable Conductor cross-section Line side Version Conductor cross-section	0.15 1.50 mm ² (AWG 24 AWG 16) screw-type terminal 1.50 16.00 mm ²	
Signal cable Conductor cross-section Line side Version Conductor cross-section Motor end	0.15 1.50 mm ² (AWG 24 AWG 16) screw-type terminal 1.50 16.00 mm ² (AWG 16 AWG 6)	
Signal cable Conductor cross-section Line side Version Conductor cross-section Motor end Version	0.15 1.50 mm ² (AWG 24 AWG 16) screw-type terminal 1.50 16.00 mm ² (AWG 16 AWG 6) Screw-type terminals 1.50 16.00 mm ²	
Signal cable Conductor cross-section Line side Version Conductor cross-section Motor end Version Conductor cross-section	0.15 1.50 mm ² (AWG 24 AWG 16) screw-type terminal 1.50 16.00 mm ² (AWG 16 AWG 6) Screw-type terminals 1.50 16.00 mm ²	
Signal cable Conductor cross-section Line side Version Conductor cross-section Motor end Version Conductor cross-section DC link (for braking resistor)	0.15 1.50 mm ² (AWG 24 AWG 16) screw-type terminal 1.50 16.00 mm ² (AWG 16 AWG 6) Screw-type terminals 1.50 16.00 mm ² (AWG 16 AWG 6)	

Mechanical data		
Degree of protection	IP20 / UL open type	
Frame size	FSC	
Net weight	7.66 kg (16.89 lb)	
Dimensions		
Width	140 mm (5.51 in)	
Height	295 mm (11.61 in)	
Depth	218 mm (8.58 in)	
Standards		
Compliance with standards	UL, cUL, CE, C-Tick (RCM), EAC, KCC, SEMI F47, REACH	
CE marking	EMC Directive 2004/108/EC, Low- Voltage Directive 2006/95/EC	

Converter losses to IEC61800-9-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	36.8 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard IEC61800-9-2) of the relative torque generating current (I) over the relative motor stator frequency (f). The values are valid for the basic version of the converter without options/components.

*calculated values

 $^{^{1)}}$ The output current and HP ratings are valid for the voltage range 440V-480V

³⁾ Typical value. More information can be found in the element group "Converter losses to IEC 61800-9-2" in this datasheet.



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	Operator pane	el: Basic Operator Panel (BOP-2)
	Screen	
Display design	LCD, monochrome	Ambient temperature
	Mechanical data	Operation
Degree of protection	IP55 / UL type 12	Storage
Net weight	0.140 kg (0.31 lb)	Transport Relative humidity at 25
Dimensions		Max. operation
Width	70.00 mm (2.76 in)	wax. operation
Height	106.85 mm (4.21 in)	
Depth	19.60 mm (0.77 in)	Certificate of suitability

A 1		
Ambient conditions		
Ambient temperature		
Operation	0 50 °C (32 122 °F)	
Storage	-40 70 °C (-40 158 °F)	
Transport	-40 70 °C (-40 158 °F)	
Relative humidity at 25°C during		
Max. operation	95 %	
Annuale		
Approvals		
Certificate of suitability CE, cULus, EAC, KCC, RCM		